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REMARKS

Claims 1-72 are pending in the present application. Claims 21, 26, 30, 33, 36, and 67 have been amended, Claims 73-75 have been added, leaving Claims 1-75 for consideration upon entry of the present Amendment. The Specification has been amended to correct certain typographical errors, as explained in detail below. Support for new Claims 73-75 can at least be found in paragraph 59. No new matter has been introduced by these new claims or these amendments. Reconsideration and allowance of the claims is respectfully requested in view of the above amendments and the following remarks.

Claim Rejections Under 35 U.S.C. § 112, First Paragraph

Claims 1-72 stand rejected under 35 U.S.C. § 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in relevant art that the inventors, at the time the applications was filed, had possession of the claimed invention. Applicants respectfully traverse this rejection.

As concerns the breadth of a claim relevant to enablement, the only relevant concern should be whether the scope of the enablement provided to one skilled in the art by the disclosure is commensurate in scope of protection sought by the claims. *In re Moore*, 439 F.2d 1232, 1236, 169 USPQ 236, 239 (CCPA 1971). Moreover,

"[A] claim preamble has the import that the claim as a whole suggests for it." *Bell Communications Research, Inc. v. Vitalink Communications Corp.*, 55 F.3d 615, 620, 34 USPQ2d 1816, 1820 (Fed. Cir. 1995). "If the claim preamble, when read in the context of the entire claim, recites limitations of the claim, or if the claim preamble is 'necessary to give life, meaning, and vitality' to the claim preamble should be construed as if in the balance of the claim." *Pitney Bowes, Inc. v. Hewlett-Packard Co.*, 182 F.3d 1298, 1305, 51 USPQ2d 1161, 1165-66 (Fed. Cir. 1999).

Applicants' submit that the preamble is not "necessary to give life, meaning, and vitality" to the claim. The Office Action recommendation to change "A data storage media" to "A data storage disk" suggests that the preamble is being used as limitation in the claims. Moreover, Applicants' respectfully submit that support that the scope of protection being sought by

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Applicants', i.e., Applicants' claimed invention, is commensurate with an enabling disclosure can be found at least at pages 3-4, paragraph 11-12, and pages 6-7 paragraph 32.

Applicants further note that the main reference cited by the Examiner in the present Office Action (U.S. Patent No. 5,538,774 to Landin et al.) claims a "rotatable storage article" and not a "disk", while US Patent No. 6,433,964 B1 to Chang claims "a method for making a high density recording medium . . .". Further evidence of these claims meeting the requirements of 35 USC § 112 are provided in U.S. Patent No. 6,544,667 to Hosoe et al. and U.S. Patent No. 6,492,035 to Yamaguchi et al., both of which were examined and allowed by Examiner Bernatz. Hosoe et al. claim a "magnetic recording medium . . .", while Yamaguchi et al. claim a "magneto-optical recording medium . . .". These are all commonly understood terms of art as acknowledged by the Examiner by allowing Hosoe et al. and Yamaguchi et al. to issue. Storage media, storage article, recording medium, data storage medium, and the like, are terms clearly understood by those skilled in the art. Therefore, the scope of enablement provided by the claims would be clearly understood by one skilled in the art. Accordingly, the rejection of Claims 1-72 under 35 U.S.C. §112, first paragraph is improper. Reconsideration and withdrawal of this rejection is requested.

Claim Rejections Under 35 U.S.C. § 112, Second Paragraph

Claims 1-11, 28-38, 51-55, 71, and 72 stand rejected under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. In particular, the Office Action states that "less than about" is indefinite barring a showing in the specification as to what values around the endpoint are envisioned to be encompassed by the word "about."

As is well settled in the case law, the term "about" is conventionally used in applications. Applicants would like to point, for examples, to the references cited by the Examiner: U.S. Patent No. 5,538,774 claims "about 0.02 mm", "a storage modulus of about 6.9×10^4 to about 1.4×10^7 Pascals", as well as "at least about 5%..." (Claims 2, 7, and 23, respectively); U.S. Patent No. 6,027,801 claims "about 10 nm..."; and U.S. Patent No. 5,741,403 claims "at least about 90 percent...", "less than about 100 Å Ra", "less than about 1.45", and "less than about 25 Å Ra" (Claims 1, 2, and 3, respectively). As can be seen from this small sampling of U.S.

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Patents, the language "about", "less than about" and the like, are conventional and are understood by those of ordinary skill in the art. Reconsideration and withdrawal of this rejection are requested.

With regard to Claim 34, Applicants' have amended Claim 30 to correct the informality noted in the Office Action. Antecedent basis for this amendment can be found at least at page 9, paragraph 35 of the disclosure. Accordingly, reconsideration and withdrawal of this rejection are requested.

Claim Objections

Applicants' have amended Claim 21, 33, and 36 to correct the informality noted in the Office Action, i.e., the claim depending on itself.

Applicants' have amended Claims 26 and 67 to correct the informality noted in the Office Action, and to better claim Applicants' invention. Antecedent basis for the amendment can at least be found at page 6, paragraph 31 of the disclosure.

Claim Rejections Under 35 U.S.C. § 103(a)

Claims 1-27, 30-53, and 56-70 stand rejected under 35 U.S.C. § 103(a), as allegedly unpatentable over U.S. Patent No. 5,538,774 to Landin et al. Applicants respectfully traverse this rejection.

Applicants' independent Claims 1 and 30 disclose a substrate comprising, *inter alia*, a plastic portion, a surface roughness of less than about 10 Å, and an axial displaced peak of less than about 500 μ under shock or vibration excitation. Further, Applicants' independent Claim 56 is directed to a data storage media, comprising: a substrate comprising at least one plastic resin portion and a core, wherein the core further comprises a varied thickness; and at least one data layer disposed on the substrate.

Landin et al. is directed to a method for internally damping a rotatable storage article, which is subject to resonant vibration (Abstract). As correctly stated in the Office Action, this reference fails to disclose a surface roughness of less than about 10 Å as claimed by Applicants' in independent Claims 1 and 30.

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For an obviousness rejection to be proper, the Examiner must meet the burden of establishing a *prima facie* case of obviousness; i.e., that all elements of the invention are disclosed in the prior art; that the prior art relied upon, coupled with knowledge generally available in the art at the time of the invention, contain some suggestion or incentive that would have motivated the skilled artisan to modify a reference or combined references; and that the proposed modification of the prior art had a reasonable expectation of success, determined from the vantage point of the skilled artisan at the time the invention was made. *In re Fine*, 5 U.S.P.Q.2d 1596, 1598 (Fed. Cir. 1988); *In Re Wilson*, 165 U.S.P.Q. 494, 496 (C.C.P.A. 1970); *Amgen v. Chugai Pharmaceuticals Co.*, 927 U.S.P.Q.2d, 1016, 1023 (Fed. Cir. 1996). Since the above cited reference does not disclose all the elements of the Applicants' claimed invention, the Office Action must show some suggestion or incentive that would have motivated a skilled artisan to modify the reference. The above cited reference does not teach or suggest a surface roughness of less than about 10 Å. As such, the obviousness rejection is improper.

Further, "[i]t is impermissible to use the claimed invention as an instruction manual or 'template' to piece together the teachings of the prior art so that the claimed invention is rendered obvious." *In re Fritch* 23 U.S.P.Q.2d 1780, 1784 (Fed. Cir. 1992). The Office Action thus cannot base a determination of obviousness on what the skilled person in the art might try or find obvious to try. Rather, the proper test requires determining what the prior art would have led the skilled person to do, with a reasonable expectation of success. The Examiner admits that Landin et al. fail to teach applicant's claimed limitations of surface roughness. Since the above cited reference fails to teach or suggest with the expectation of success, a substrate comprising, *inter alia*, a surface roughness of less than about 10 Å, the obviousness rejection is improper.

It is noted that the Examiner relies upon inherency to allegedly show the features of edge-lift height, and axial displacement peak. The Examiner goes on to state that "even in the instance that the claimed limitations of 'an edge-lift height' and 'an axial displacement peak' would not have necessarily been present... it would have been obvious to one having ordinary skill in the art to have minimized the cause effective variables such as 'an edge-lift height' and 'an axial displacement peak' to values meeting applicants' claimed limitations through routine experimentation...". Additionally, where the Examiner does not rely upon inherency he makes the general statement that "it would have been obvious..." without providing support for this

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position. Applicants contend that, at the time the application was filed, a storage media comprising a substrate comprising a plastic portion to have the parameters claimed by Applicants, including the roughness, edge-lift height, and axial displacement peak, was not obvious. Merely because, in hindsight, a particular property may be desirable, does not render that property inherent or even obvious. For example, every tire manufacturer may want a tire that has stopping traction on ice yet can be used efficiently on a dry road. However, the actual tire that is capable of such properties is neither inherent or obvious in view of the current tire technology; desirable, yes, but not obvious.

It must additionally be noted, as is clearly set forth in *In re Shetty*, even that which is inherent in the prior art, if not known at the time of the invention, *cannot* form a proper basis for rejecting the claimed invention as obvious under §103. *In re Shetty*, 566 F.2d 81,86, 195 U.S.P.Q. 753, 756-57 (C.C.P.A. 1977). Inherency "is quite immaterial if... one of ordinary skill in the art would not appreciate or recognize the inherent result." *In re Rijckaert*, 9 F.3d 1531, 1533, 28 U.S.P.Q.2d 1955, 1957 (Fed. Cir. 1993). In other words, the use of inherency to reject a claim as obvious is not proper. Reconsideration and withdrawal of this rejection is respectfully requested.

Additionally, even if the rejection was proper, the Examiner has still failed to establish a *prima facie* case of obviousness. A "feature is inherent if it naturally occurs under the conditions set forth in the reference..." *Consolidated Aluminum Corp. v. Foseco International Ltd.*, 10 USPQ2d 1143, 1165 (N.D. Ill. 1988). Inherency may not be established by probabilities or possibilities. The mere fact that a certain thing may result from a given set of circumstances is not sufficient. *Continental Can Co. v. Monsanto*, 948 F.2d 1264, 1269 (Fed. Cir. 1991). The fact that a certain result or characteristic may occur or be present in the prior art is not sufficient to establish the inherency of that result or characteristic. *In re Rijckaert*, 9 F.3d 1531, 1534, 28 USPQ2d 1955, 1957 (Fed. Cir. 1993) (*reversed rejection because inherency was based on what would result due to optimization of conditions, not what was necessarily present in the prior art*); *In re Oelrich*, 666 F.2d 578, 581-82, 212 USPQ 323, 326 (CCPA 1981); *emphasis added*. "To establish inherency, the extrinsic evidence must make clear that the missing descriptive matter is necessarily present in the thing described in the reference, and that it would be so recognized by persons of ordinary skill. Inherency, however, may not be established by probabilities or

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possibilities. The mere fact that a certain thing may result from a given set of circumstances is not sufficient.” *In re Robertson*, 169 F.3d 743, 745, 49 USPQ2d 1949, 1950-51 (Fed. Cir. 1999). Furthermore, “in relying upon the theory of inherency, the examiner must provide a basis in fact and/or technical reasoning to reasonably support the determination that the allegedly inherent characteristic necessarily flows from the teachings of the applied prior art.” *Ex parte Levy*, 17 USPQ2d 1461, 1464 (Bd. Pat. App. & Inter. 1990)” MPEP 2112.

A basis in fact and/or technical reasoning that reasonably supports the determination that the allegedly inherent characteristic necessarily flows from the teachings of the applied prior art has not been supplied. A mere allegation that the property is present because the products are allegedly substantially identical in structure (see Paper 10, page 8) does not constitute a “basis in fact and/or technical reasoning”. As is clearly evident from the amount of art in this field, from the huge advances in storage capacity, quality, and media longevity in the storage media industry in the last 25 years, unless a feature is specified, it cannot be considered inherent. For example, merely because a group of media have substrates, data layers, reflective layers, dielectric layers, and protective layers in no way means that the media are “identical in structure”. The composition, location, geometry, size, and manner of forming the various layers and substrate can all be factors in rendering all of the media substantially different from one another. The industry has advanced from floppy discs to hard discs, from records, cassettes and the like to CD’s, laser discs, and DVD’s. Slight changes in a CD, e.g., reading from the surface of the disc instead of through the disc, enabled a significant increase in storage capacity. Adjustment of the wavelength of the read laser and/or the reflectivity of the reflective layer enabled the use of two data layers, essentially doubling storage capacity. There are numerous papers and patents about how to put the data layers on the discs, e.g., photoresists. Patents discuss how to reduce birefringence, improve readability and reproducibility. Many of these patents focus on changes that, in hindsight, may appear insignificant but which were substantial and have advanced the technology to where DVD’s are becoming as common as VCR’s in average homes. Advances and inventions must be considered at the time of the invention, not in hindsight. Particularly in this field, a period of as little as one year can bring a substantial change in the industry. What was impossible, even unthinkable, one year is commonplace a year later.

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Applicants have identified several characteristics, including axial displacement, roughness, edge-lift tilt, mechanical damping coefficient, moment of inertia, specific gravity, resonant frequency, first modal frequency, and the like, which enables further advancement of the storage media technology. The references of record, alone and in combination, fail to teach or suggest the significance or presence of these features. Even if the understanding of the industry of these, and other features, has changed since the time of the present invention, such change does not effect the patentability of the present application; patentability is determined at the time of the present application, not in hindsight from the teachings of the present application or from the general desires of the technology or industry today. In other words, merely because a feature or characteristic may appear desirable today does not mean or even suggest that it was desirable, understood, considered, or inherent at the time of the present application. For example, there is no reason or teaching of a specific resonant frequency, or of a first modal frequency of greater than an operating frequency, or modal frequency(ies) of less than an operating frequency, and the Examiner fails to provide any reason why such elements would be obvious based upon the prior art.

Furthermore, regarding independent Claim 30, the Examiner stated that "the claimed areal recording density is a function of the track width, track density and spatial location of the head relative to the medium, and is not a property solely of the media, per se, and therefore has been given little weight in determining the patentability since it is an intended-use limitation." (Paper 10, page 9). Applicants respectfully disagree. As is taught throughout the present application, areal density is a function of various properties and combinations of those properties. For example, that is why a much greater storage density is obtained on a compact disc versus a floppy disk. The properties are different enabling a different density. Applicants contend that the storage densities do add patentable subject matter.

Considering that the claimed properties are not inherent and that the reference fails to teach or suggest all of the elements of the presently claimed invention, Landin et al. fail to render the present claims obvious. Furthermore, considering that, in accordance with the case law set forth in *In re Shetty*, inherency cannot be employed to reject a case under 35 U.S.C. §103, the present claims are not obvious in view of Landin et al., and the rejection is improper. Reconsideration and withdrawal of the rejection is requested. It is further noted that, as

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dependent claims from an allowable independent claims, Claims 2-27, 31-53, and 57-70 are, by definition, also allowable.

Claims 1-14, 17, 18, 20, 21, 24-26, 30-39, 42, 43, 45, 46, and 49-53 stand rejected under 35 U.S.C. § 103(a), as allegedly unpatentable over JP-02-096921 A (JP '921; abstract only). Applicants respectfully traverse this rejection.

The abstract to JP '921 is directed to a substrate formed of plastics or composite materials composed of plastic and ceramic layers laminated alternately, a non-magnetic ground layer, a magnetic layer and a protective lubricating layer (Abstract). As correctly stated in the Office Action, this reference fails to disclose a surface roughness of less than about 10 Å as claimed by Applicants' in independent Claims 1 and 30. This abstract further fails to teach or suggest any of the other claimed elements of the present application, including edge lift, axial displacement, mechanical damping coefficient, core properties (geometry, size, material), modal frequencies, and many others.

As discussed above, for an obviousness rejection to be proper, the Examiner must meet the burden of establishing a *prima facie* case of obviousness. Since the above cited reference does not disclose all the elements of the Applicants' claimed invention, the Office Action must show some suggestion or incentive that would have motivated a skilled artisan to modify the reference. The above cited reference does not teach or suggest a surface roughness of less than about 10 Å, or many other claimed features. Therefore, the Examiner has not established a *prima facie* case of obviousness. As such, the obviousness rejection is improper.

Further, the Office Action cannot base a determination of obviousness on what the skilled person in the art might try or find obvious to try. Rather, the proper test requires determining what the prior art would have led the skilled person to do, with a reasonable expectation of success. The Examiner admits that JP '921 fails to teach applicant's claimed limitations of surface roughness. Since the above cited reference fails to teach or suggest with the expectation of success, a substrate comprising, *inter alia*, a surface roughness of less than about 10 Å, the obviousness rejection is improper.

It is noted that the Examiner relies upon inherency to allegedly show the features of edge-lift height and axial displacement peak. The Examiner goes on to state that "even in the instance

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that the claimed limitations of 'an edge-lift height' and 'an axial displacement peak' would not have necessarily been present... it would have been obvious to one having ordinary skill in the art to have minimized the cause effective variables such as 'an edge-lift height' and 'an axial displacement peak' to values meeting applicants' claimed limitations through routine experimentation...". Additionally, where the Examiner does not rely upon inherency he makes the general statement that "it would have been obvious..." without providing support for this position. Applicants contend that, at the time the application was filed, a storage media comprising a substrate comprising a plastic portion to have the parameters claimed by Applicants, including the roughness, edge-lift height, axial displacement peak, and the like, was not obvious. Furthermore, Applicants direct the Examiner's attention to the above cited case law, inherency *cannot* form a proper basis for rejecting the claimed invention as obvious under §103. In other words, the use of inherency to reject a claim as obvious is not proper. Reconsideration and withdrawal of this rejection is respectfully requested.

Additionally, even if the rejection was proper, the Examiner has still failed to establish a *prima facie* case of obviousness. Referring to the above cited case law, a "feature is inherent if it naturally occurs under the conditions set forth in the reference..." The mere fact that a certain thing may result from a given set of circumstances is not sufficient.

A basis in fact and/or technical reasoning that reasonably supports the determination that the allegedly inherent characteristic necessarily flows from the teachings of the applied prior art has not been supplied. A mere allegation that the property is present because the products are allegedly substantially identical in structure (see Paper 10, page 14) does not constitute a "basis in fact and/or technical reasoning." For at least the reasons mentioned in the above arguments made against the Landin art, media are not "identical in structure" merely because the media have substrates, data layers, reflective layers, dielectric layers, and protective layers. For example, the composition, location, geometry, size, and manner of forming the various layers and substrate can all be factors in rendering various media substantially different from one another. In short, as is clearly evident from the amount of art in this field, and from the huge advances in storage capacity, quality, and media longevity in the storage media industry in the last 25 years, unless a feature is specified, it cannot be considered inherent.

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Applicants have identified several characteristics, including axial displacement, roughness, edge-lift tilt, mechanical damping coefficient, moment of inertia, specific gravity, resonant frequency, first modal frequency, and the like, which enables further advancement of the storage media technology. The references of record, alone and in combination, fail to teach or suggest the significance or presence of these features. Even if the understanding of the industry of these, and other features, has changed since the time of the present invention, such change does not effect the patentability of the present application; patentability is determined at the time of the present application, not in hindsight from the teachings of the present application or from the general desires of the technology or industry today. For example, there is no reason or teaching of a specific resonant frequency, or of a first modal frequency of greater than an operating frequency, or modal frequency(ies) of less than an operating frequency, and the Examiner fails to provide any reason why such elements would be obvious based upon the prior art.

For at least the above reasons, Claims 1 and 30 of the present application are non-obvious over Landin et al. Additionally, as dependent claims from an allowable independent claims, Claims 2-14, 17, 18, 20, 21, 24-26, 31-39, 42, 43, 45, 46 and 49-53 are, by definition, also allowable.

Claims 1-14, 17, 18, 20, 21, 24-39, 42, 43, 45, 46, and 49-55 stand rejected under 35 U.S.C. § 103(a), as allegedly unpatentable over U.S. Patent No. 6,433,964 to Chang. Claims 1-27, 30-53, 56, and 58-68 stand rejected under 35 U.S.C. § 103(a), as allegedly unpatentable over the abstract of Otada et al. (JP 63-205817A; abstract only). Applicants respectfully traverse these rejections.

Chang is directed to a method of making a high density recording medium having a non-magnetic metallic layer on a *flexible substrate*; wherein the high density recording medium can be used as *floppy disk* with greater data storage capacity (Abstract). As correctly stated in the Office Action, this reference fails to disclose a surface roughness of less than about 10 Å as claimed by Applicants' in independent Claims 1 and 30. Applicants further contend that a floppy disk clearly would not have an axial peak displacement of less than about 500μ or other features of the present claims such as the claimed damping coefficient, edge lift, moment of inertia,

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modal frequencies, core (geometry, size, etc.), etc. A floppy disk, by definition, is "floppy". It would not have the claimed properties and is not a proper reference against the present claims.

Otada et al. disclose that to improve surface smoothness so that the deformation is prevented at the time of forming an underlying and magnetic layer and to permit reduction in weight and improvement in productivity by coating the surface of a ceramic substrate with a heat resistant plastic layer (Abstract). As correctly stated in the Office Action, this reference fails to disclose a surface roughness of less than about 10 Å as claimed by Applicants' in independent Claims 1 and 30.

As discussed above, for an obviousness rejection to be proper, the Examiner must meet the burden of establishing a *prima facie* case of obviousness. Since the above cited references do not disclose all the elements of the Applicants' claimed invention, the Office Action must show some suggestion or incentive that would have motivated a skilled artisan to modify the references. The above cited references do not teach or suggest many of the elements of the present claims, including, as admitted by the Examiner, a surface roughness of less than about 10 Å. Therefore, the Examiner has not established a *prima facie* case of obviousness. As such, the obviousness rejection is improper. Further, with respect to the floppy disk, an artisan would not in any way assume that such a disk would have the claimed properties or in anyway believe that such a media could be modified to have such properties.

It is additionally noted that a determination of obviousness cannot be based on what the skilled person in the art might try or find obvious to try. Rather, the proper test requires determining what the prior art would have led the skilled person to do, with a reasonable expectation of success. The Examiner admits that Chang and Otada et al. fail to teach Applicants' claimed limitations of surface roughness. Since the above cited reference fails to teach or suggest with the expectation of success, a substrate comprising, *inter alia*, a surface roughness of less than about 10 Å, the obviousness rejection is improper.

It is noted that the Examiner relies upon inherency to allegedly show the features of edge-lift height, and axial displacement peak. The Examiner goes on to state that "even in the instance that the claimed limitations of 'an edge-lift height' and 'an axial displacement peak' would not have necessarily been present... it would have been obvious to one having ordinary skill in the art to have minimized the cause effective variables such as 'an edge-lift height' and 'an axial

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displacement peak' to values meeting applicants' claimed limitations through routine experimentation...". (Paper 10, page 21, 27) Additionally, where the Examiner does not rely upon inherency he makes the general statement that "it would have been obvious..." without providing support for this position. (Paper 10, page 21, 27) Applicants contend that, at the time the application was filed, a storage media comprising a substrate comprising a plastic portion and having the parameters claimed by Applicants, including the roughness, edge-lift height, and axial displacement peak, was not obvious. Furthermore, the references fail to teach all of the claimed limitations

For at least the above reasons, the claims of the present application are non-obvious over Chang and Otada et al. Additionally, as dependent claims from an allowable independent claims, Claims 2-27, 31-53, and 58-68 are, by definition, also allowable.

Claims 28, 29, 54, 55, 71 and 72 stand rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over U.S. Patent No. 5,538,774 to Landin et al., and further in view of U.S. Patent No. 6,156,422 to Wu et al. Applicants respectfully traverse this rejection.

Wu et al. teach that the linear recording density can be increased by increasing the coercivity of the magnetic recording medium (Col. 1, lines 31-32). The Examiner stated that it would have been obvious to one having ordinary skill in the art to have modified the invention of Landin et al. by increasing the coercivity of the data storage layer to values meeting applicants claimed limitations as taught by Wu et al. (Paper 10, page 13) Applicants respectfully disagree.

As is taught throughout the present application, areal density is a function of various properties and combinations of those properties. For example, that is why a much greater storage density is obtained on a compact disc versus a floppy disk. The properties are different enabling a different density. Wu et al. fail to remedy all of the above discussed deficiencies of Landin et al. For example, Wu et al. fail to teach or suggest with the expectation of success, a substrate comprising, *inter alia*, a surface roughness of less than about 10 Å. Wu et al. further fail to teach or suggest any of the other claimed elements of the present application, including edge lift, axial displacement, mechanical damping coefficient, core properties (geometry, size, material), modal frequencies, and many others. Since the above-cited references do not teach or suggest each element in Applicants' independent claims, the obviousness rejection is improper. As such, any

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claim depending from an allowable independent claim is by definition also allowable. Accordingly, Claims 28, 29, 54, 55, 71 and 72 are allowable.

Claims 15, 16, 19, 22, 23, 27, 40, 41, 44, 47, 48, and 56-70 stand rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over JP-02-096921 A (JP '921; abstract only), and further in view of U.S. Patent No. 5,538,774 to Landin et al. Claims 28, 29, 54, 55, 71, and 72 stand rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over JP '921, and further in view of U.S. Patent No. 6,156,422 to Wu et al. Claims 15, 16, 19, 22, 23, 40, 41, 44, 47, 48, and 56-72 stand rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over Chang, and further in view of Landin et al. Claims 69 and 70 stand rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over (JP 63-205817A) Otada et al., and further in view of Landin et al. Claims 28, 29, 54, 55, 71 and 72 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Otada et al., and further in view of Wu et al.

As discussed above each of the above cited references, alone and in combination, fail to teach or suggest many of the elements of the present claims, including, as admitted by the Examiner, a surface roughness of less than about 10 Å. Moreover, absent in the cited references is a suggestion or incentive that would have motivated the skilled artisan to modify the references or combine the references with any expectation of success. Since the above-cited references do not teach or suggest each element in Applicants' independent claims as set forth in detail above, and since inherency is not properly relied upon in a 35 U.S.C. §103 rejection as also set forth above, the obviousness rejections are improper. As such, the present claims are allowable.

Art of Record

The Office Action States that many references deal with controlling or optimizing physical and mechanical properties of substrates (see Paper 10, page 32). However, the Examiner has not relied upon these references to base his rejections nor has he showed how any of these references teach or suggest applicants claimed invention. As reiterated throughout this response, Applicants do not deny that the area of storage media is a crowded art or that improvements are desired. However, none of the references of record teach the media claimed in the present application.

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It is believed that the foregoing amendments and remarks fully comply with the Office Action and that the claims herein should now be allowable to Applicants. Accordingly, reconsideration and allowance is requested.

If there are any additional charges with respect to this Amendment or otherwise, please charge them to Deposit Account No. 07-0862 maintained by Assignee.

Respectfully submitted,

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